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RESEARCH ARTICLE

Examining the Impact of Using YouTube on Improving the Learning Process at Faryab University in 1404 (2025–2026)

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ABSTRACT

The purpose of the present study was to examine the impact of using YouTube on improving the learning process of students at Faryab University in 1404 (2025–2026). In terms of purpose, this research was applied, and in terms of nature, it was descriptive-correlational. The statistical population of this study consisted of all daytime students at Faryab University in the academic year 1404 (2025–2026), totaling 3,592 students. From this population, 364 participants were selected using a multistage cluster sampling method and completed a researcher-developed questionnaire. The reliability of the questionnaire was confirmed using Cronbach's alpha coefficient (above 0.9 for all indicators). The data were analyzed using SPSS version 27 software. The results of Spearman correlation tests and simple and multiple regression analyses using the bootstrap resampling approach indicated that the level of YouTube usage had a positive and significant effect on learning autonomy (B = 0.812), sense of competence (B = 0.765), cognitive engagement and educational interaction (B = 0.711), and learning improvement (B = 0.733). However, the variable "main purpose of using YouTube" did not show a significant effect on improving the learning process (B = -0.019, 0.357). Ultimately, the frequent and systematic use of the YouTube platform as a purposeful educational aid can play a highly important and influential role in enriching educational experiences and meeting students' psychological needs in Afghan universities, especially at Faryab University. YouTube functions as more than just a media platform. It can facilitate self-directed learning and foster scholarly exchange. In this context, the instructor can play a more effective role as a guide and mentor.

ARTICLE INFO

Keywords: *Educational Interaction, Learning Autonomy, Learning Process, Sense of Competence, YouTube .*

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Introduction

In the name of Allah, the Most Compassionate, the Most Merciful. All praise and abundant gratitude are due to Allah, who guided us along the path of knowledge creation and granted us the ability to complete this research. We pray that Almighty Allah accepts this effort and deems it worthy of His reward.

Following the integration of modern media into education, the traditional learning process underwent a profound transformation (Dabamona & Yunus, 2022; Ohei, 2019). Among these technologies, YouTube has emerged as one of the most widely used and valuable educational tools (Maziriri et al., 2020). The YouTube platform is regarded as an effective resource for both instructors and students (Alobaid, 2020). With its diverse educational features, YouTube facilitates learning in multiple ways. Its ability to engage visual and auditory senses, along with its interactive capabilities, has made it a powerful tool for fostering creativity and increasing student engagement. In addition, the flexibility to learn at one's own pace and replay videos enables students to better understand difficult and complex concepts (Dikilitas & Fructuoso, 2023; Ebied et al., 2016; Tan, 2013).

Easy accessibility and flexibility are among the other important features of YouTube (Staziaki et al., 2021).

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These capabilities allow students to access YouTube anytime and anywhere, enabling them to learn at their own preferred pace (Abubakar et al., 2023). Free access to YouTube has encouraged students to go beyond textbooks and classroom instruction by actively searching for and exploring additional knowledge (Attardi et al., 2022; Mpungose, 2020; Tolkach & Pratt, 2021). Video clips, with their distinctive appeal and innovative presentation, tend to leave a lasting impression in learners' minds and align well with the interests and preferences of audiences (Lange, 2018; Riley, 2017; Santiago Jr. et al., 2021). The diversity of available content also encourages students to engage in learning independently and voluntarily, promoting self-motivated and personalized education (López-Buenache et al., 2022; Nagler et al., 2019; Wickman et al., 2021).

The increasing use of YouTube in education has prompted greater consideration of its integration into educational programs and curricula. Familiarizing instructors with the opportunities and challenges associated with YouTube enables them to incorporate the platform into their teaching more effectively and purposefully, thereby enhancing the learning experience for students (Pal & Patra, 2021; Tahat et al., 2022).

Numerous studies have demonstrated that the YouTube platform has a direct positive impact on learning outcomes and the comprehension of concepts. Noetel et al. (2021) and Yahaya & Ahmad (2025) found that videos incorporating visual elements, such as diagrams and animations, can significantly enhance the understanding of complex concepts. Likewise, Bouzayenne (2025) concluded that YouTube can contribute to academic achievement by strengthening learners' metacognitive and social learning processes. Amalia and Santoso (2025), Jafar et al. (2025), Almurashi (2016), Ali et al. (2022), Fadhil Abbas and Ali Qassim (2020), and Kariapper (2020) also found that the use of YouTube promotes academic achievement, improves conceptual learning, and enhances students' overall understanding of instructional content.

Enhanced learner engagement and increased motivation have also been consistently reported in studies examining the educational use of YouTube. students expressed high levels of satisfaction with online instructional materials and concluded that the YouTube platform can have a positive impact on their learning activities (Fynn et al., 2021; Khan et al., 2023; Shahzadi, 2024). Astutie (2024) reported that the diversity of content available on YouTube promotes independent thinking, active learning, and academic motivation. Similarly, Ongor and Uslusoy (2023), Yamin et al. (2023), Pratama et al. (2020), and Babu et al. (2019) found that video-based instructional content enhances students' creativity, cognitive engagement, and educational interaction.

Numerous studies have concluded that YouTube should be used as a supplementary educational tool rather than as a complete replacement for formal education. Instructors primarily use YouTube to develop and provide educational resources (Abubakar et al., 2025). Salsabila et al. (2025) found that the use of YouTube has brought significant changes to higher education, particularly by improving access to learning materials. Yamin et al. (2022), Ali et al. (2022), Abubakar et al. (2023), Tella et al. (2020), Noori and Noori (2021), and Kohler and Dietrich (2021) also concluded that YouTube can effectively serve as a supplementary instructional resource, especially for online learning, the presentation of practical examples, and the enrichment of course content. Yahaya and Ahmad (2025) and Rahmatika et al. (2021) also emphasized the importance of teachers' guidance in selecting content that aligns with educational objectives.

A significant portion of the studies focuses on the impact of YouTube on language learning, Rustan and Hamidi (2024), Saed et al. (2021), Sahayu and Friyanto (2019), and Dabamona and Yunus (2022) all demonstrate that YouTube is highly effective in improving speaking, writing, vocabulary, pronunciation, sentence structure, and language comprehension skills.

Various studies have also shown that YouTube provides a platform for self-directed learning. Dabamona and Yunus (2022), Schicchi, Marino and Taibi (2021), and Halim et al. (2022) stated that YouTube offers users opportunities for personalized learning. Supendra and Amilia (2021) reported that students experience greater independence, responsibility, and self-confidence when searching for educational materials on YouTube.

In Afghanistan as well, studies have emphasized the importance of digital tools and YouTube in education. Haidari et al. (2020), Khalid (2020), and Hadid et al. (2025) demonstrated that YouTube functions as an important educational resource for university students and has a significant impact on academic achievement, professional skill development, and learning. Darwishian et al. (1403) concluded that the use of YouTube enhances students' learning levels beyond the average. Noori et al. (2022) and Noori and Bashardost (2026) showed that digital media and social networks improve access to educational resources, facilitate interactive learning, and enhance the quality of education.

A review of previous studies indicates that the majority of domestic and international research has

focused on the positive impact of the YouTube platform on enhancing learning, increasing motivation, strengthening skills, and developing teaching methods. Few studies have been conducted on the impact of YouTube on learning in Afghan universities, particularly at Faryab University. Most of the existing research has generally focused on social media or online education as a whole rather than on the purposeful use of YouTube in higher education institutions. This research gap motivated me to undertake the present study.

The Self-Determination Theory (Deci & Ryan, 2008) emphasizes that the quality of learning improves when learners feel that they are independent, have the ability to make choices, and have control over their educational activities. A particularly important aspect in this regard is intrinsic motivation. Intrinsic motivation is strengthened when competence, autonomy, and social relatedness are established, leading students to engage in learning with greater participation and motivation. Similarly, the E-Learning Theory (Sweller et al. (1998); Mayer (2019); Wang and Chen (2020) suggests that the purposeful use of modern educational technologies, particularly videos, can enhance the learning process, provided that instructional materials are designed in a structured and goal-oriented manner. Accordingly, platforms such as YouTube can both strengthen students' self-directed motivation and facilitate deeper and more effective learning by presenting organized audiovisual content.

Therefore, the present study was conducted to analyze the impact of using YouTube on improving the learning process of students at Faryab University in 1404 (2025–2026). The present study aims to examine the use of YouTube in education and evaluate its role in improving students' sense of competence, independent learning, educational interaction, and cognitive engagement. Therefore, the main research question is whether the use of YouTube can contribute to improving the learning process at Faryab University.

The present study also seeks to answer the following research questions:

1. Does the use of YouTube enhance students' autonomy and sense of competence in the learning process?
2. Does the use of YouTube increase students' cognitive engagement and educational interaction?
3. Is there a significant relationship between the extent and purpose of YouTube use and the level of improvement in students' learning?

Research Methodology

The present study was conducted using a descriptive-correlational research design. The statistical population of this study consisted of full-time students of Faryab University, with a total number of 3,592 students in 2025. The required sample was selected using a multistage cluster sampling method, and the sample size was determined as 347 participants based on Cochran's formula. However, considering the possibility of non-response, incomplete responses, or the loss of some questionnaires during the data collection process, the final sample size was increased to 364 participants. Furthermore, descriptive and inferential statistical methods were employed for data analysis. To test the research hypotheses, Spearman's correlation coefficient, linear and multiple regression, along with bootstrapping techniques were applied. In addition, the content validity of the questionnaire was confirmed by three university professors. The reliability of the study was assessed using Cronbach's alpha coefficient with SPSS software version 27. Data were collected using researcher-designed questionnaires that were distributed in person. A large proportion of the distributed questionnaires were fully completed and returned.

Population and Sampling

The statistical population of this study includes all undergraduate daytime programs at Faryab University in the academic year 1404, covering faculties such as Literature and Humanities, Education, Agriculture, Economics, Law and Political Science, Engineering, Sharia, and Computer Science. All individuals, regardless of their field of study or year of entry, are included in this population because the use of YouTube as an educational resource is not limited to any specific discipline. The selection of this population was made due to the extensive use of digital media and students' reliance on YouTube for learning and self-directed education. The diversity of academic disciplines and educational levels among participants increases the generalizability of the research findings to the entire university.

Data were collected between 22 November and 8 December 2025. This study employed a multi-stage cluster sampling method. Initially, the faculties were divided into separate strata. Afterwards, the sample size for each stratum was determined according to the number of

students in that stratum, and students were selected from each stratum using a simple random sampling method. This procedure was carried out in a way that ensured every member of the population had an equal chance of being selected.

Data Collection Instrument

The researcher-developed questionnaire was used as the main data collection instrument in this study. The content validity of the questionnaire was evaluated by three university professors. After receiving their feedback and making the necessary revisions, the content validity of the questionnaire was confirmed. Meanwhile, the reliability of the questionnaire was assessed using Cronbach's alpha coefficient, which yielded a value of 0.96. This value confirms a high level of internal consistency of the questionnaire.

The questionnaire consisted of six sections, and these sections were designed based on the theories applied in the study. The mentioned sections are as follows:

- **YouTube usage level:** This section included 5 items examining regular use, learning academic topics, using YouTube as a primary source, searching for course-related videos, and watching videos completely and attentively.
- **Learning autonomy:** This section contained 4 items addressing learning choice, control over learning, setting learning pace, and adapting learning methods according to needs.
- **Sense of competence:** This part included 4 items focusing on improved understanding of course materials, feelings of capability, solving academic exercises, and increased self-confidence.
- **Educational engagement and cognitive involvement:** This section had 5 items covering increased concentration and attention, reflection on content, problem-solving activities, learning new points, and expressing opinions about the material.
- **Improvement of the learning process:** This section consisted of 5 items measuring improvement in academic performance and grades, understanding difficult concepts, increased motivation, acquisition of skills, and making the learning experience more enjoyable and lasting through the use of YouTube.

All sections were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). This structure enabled the participants to accurately express the extent of their agreement or disagreement, resulting in the collection of reliable and valid data. In addition, the questionnaire included demographic information, which was used during the data analysis process.

Data Collection Procedure

The research data were collected during the period from November 22 to December 8, 2025. Before distributing the questionnaires, the researcher provided a brief oral explanation regarding the purpose of the study and its related ethical considerations. The participants were assured that their participation was voluntary, their information would remain confidential, and they were informed that they could withdraw from the study at any stage if they wished.

The questionnaires were distributed in person within the university premises. Participants were given 10 to 15 minutes to complete the questionnaires carefully.

After completion, the questionnaires were collected, organized, and securely stored. It is worth noting that, to ensure the anonymity of the participants, no personal information such as names or student identification numbers was recorded.

Data Analysis

The collected data were initially coded and then analyzed using SPSS version 27. The items were arranged on a Likert scale ranging from "strongly disagree" to "strongly agree." The main research indicators were developed based on the calculation of the mean scores of the items. Before conducting the data analysis, the data were cleaned to ensure their accuracy and quality. A normality test was also performed, and the results indicated that the data did not follow a normal distribution. Therefore, non-parametric statistical methods were used for data analysis.

Ethical Considerations

Ethical principles were fully observed throughout all stages of the research. Before completing the questionnaire, participants were provided with detailed information regarding the necessary aspects, particularly confidentiality measures and how the collected data would be used. No personally identifiable information was collected from any participant, and the questionnaires were securely stored in a safe location with restricted access.

The data were used solely for academic research purposes and were presented in an aggregated manner to ensure the confidentiality of participants' information.

Findings

In this section, the results of the quantitative data analysis were presented to examine the impact of YouTube use on improving the learning process of Faryab University students in the year 1404 (2025). The main research variables, including the extent of YouTube use, learning autonomy, sense of competence, educational interaction, cognitive engagement, and improvement of the learning process, were analyzed and examined.

For each analyzed component, descriptive statistics were calculated, and the results were presented through tables along with the necessary explanations.

Table 1. Results of the Kolmogorov–Smirnov Test

Variables	Statistic	Sig.
Level of YouTube Usage	0.142	0.001
Learning Autonomy	0.171	0.001
Sense of Competence	0.198	0.001
Educational Interaction and Cognitive Engagement	0.166	0.001
Improvement of the Learning Process	0.174	0.001

As observed in the above table, none of the indicators follow a normal distribution. Therefore, for variables that do not meet the assumption of normality, the most appropriate statistical methods identified for this study were the Spearman correlation coefficient and linear and multiple regression analyses with bootstrapping. These methods were used for data analysis and hypothesis testing.

Demographic Characteristics of the Respondents

As shown in Table 2, a total of 364 students participated in the study. According to the results presented in the table, more than half of the participants (64.8%) were between 20 and 23 years old, indicating the extensive participation of young people in the research.

Table 2. Demographic characteristics

Variabler	Category	Frequency	Percentage
Age	Under 20 years old	69	19
	20–23 years old	236	64.8
	24 years old and above	53	14.6
Field of Study	Literature and Humanities	73	20.1
	Education	48	13.2
	Agriculture	43	11.8
	Economics	38	10.4
	Law and Political Science	31	8.5
	Engineering	68	18.7
	Sharia / Islamic Studies	24	6.6
	Computer Science	36	9.9
Academic Year	First Year	44	12,1
	Second Year	37	10.2
	Third Year	143	39.3
	Fourth Year	126	34.6
Level of Internet Usage	Very High	31	8.5
	High	34	9.3
	Moderate	156	42.9
	Low	79	21.7
	Very Low	57	15.7
Hours of YouTube Use per Week	Less than 2 hours	234	64.3
	2–5 hours	82	22.5
	6–10 hours	20	5.5
	More than 10 hours	15	4.1
Main Purpose of Using YouTube	Education and Learning	224	61.5
	Entertainment and Recreation	29	8
	Keeping Up with News	25	6.9
	Language or Skill Learning	30	8.2
	Other	43	11.8

Furthermore, in terms of academic field, the Faculty of Literature and Humanities ranked first (20.1%), followed by the Faculty of Education in second place (13.2%). Regarding the academic year variable, the majority of respondents (39.3%) were third-year students.

In terms of internet usage, less than half of the respondents (42.9%) were categorized at a moderate level. More than half of the participants (64.3%) used YouTube for less than two hours per week, indicating relatively low

internet usage among students. Regarding the purpose of YouTube use, the majority of participants (61.5%) reported using YouTube for educational purposes.

First Hypothesis: The use of YouTube increases students' learning autonomy and sense of competence.

Table 3. Spearman Correlations and Bootstrap Multivariate Analysis Results for Predicting Autonomy and Competence Based on YouTube Usage

Dependent Variable	Spearman's r_s	B	SE_B	F	P	η_p^2	95% Bootstrap CI [Lower, Upper]
Learning Autonomy	0.708	0.812	0.055	497.442	P<0.001	0.579	[0.688, 0.913]
Feelings of Competence	0.660	0.765	0.061	402.083	P<0.001	0.526	[0.634, 0.881]

To analyze the first hypothesis and examine the relationship between the extent of YouTube usage and learning autonomy as well as sense of competence in learning, Spearman's correlation test was employed due to the non-normal distribution of the data. The findings revealed a positive and significant relationship between the level of YouTube usage and both learning autonomy and sense of competence. Specifically, the correlation between the extent of YouTube usage and self-directed learning was 0.708, with a significance level below 0.001. Likewise, the relationship between YouTube usage and sense of competence was observed with a correlation coefficient of 0.660 and a significance level below 0.001.

Since the data of this study did not meet the assumption of normality, regression analysis using the bootstrap method with 5,000 resamples was conducted to examine the effect of YouTube usage on the variables of learning autonomy and sense of competence. The results showed that the level of YouTube usage had a positive and statistically significant effect on Learning autonomy ((B = 0.812, SEB = 0.055, F = 497.442, p < 0.001, η2p = 0.579)). The partial eta-squared index further indicated that YouTube usage accounted for 57.9% of the variance in learning autonomy within the learning process. Since the value zero is not included within the results of this test, the stability of the model structure can be confirmed.

Based on the above results, YouTube use has a positive effect on the sense of competence (B = 0.765, SEB = 0.061, F = 402.083, p < 0.001, η^2p = 0.526). This indicates that the mentioned variable explains 52.6% of the variance in respondents' sense of competence. Furthermore, since zero does not fall within the 95% bootstrap confidence interval for the sense of competence (0.634, 0.881), this relationship is supported. Based on the results obtained from the Spearman correlation test and bootstrap regression analysis, it can be concluded that the first hypothesis of the present study is supported.

Second Hypothesis: The use of YouTube enhances students' cognitive engagement and educational interaction.

Table 4. Spearman Correlation and Bootstrap Regression Results for Predicting Engagement and Interaction Based on YouTube Usage

Predictor	Spearman's r_s	B	SE_B	F	P	R^2	95% Bootstrap CI [Lower, Upper]
YouTube Usage	0.633	0.711	0.061	315.615	0.001>	0.466	0.578, 0.828

To examine the second hypothesis and determine the relationship between the extent of YouTube usage and the variables of cognitive engagement and educational interaction in learning, Spearman's correlation test was employed because the data did not follow a normal distribution. The results of this test indicated a positive and significant relationship between the level of YouTube usage and cognitive engagement as well as educational interaction (correlation coefficient = 0.633, significance level < 0.001).

Since the data were non-normal, a second-stage analysis was conducted using Multivariate Analysis of Variance (MANOVA) with a bootstrap resampling technique in order to more clearly explain the effect of the independent variable. The results presented in the table indicate that the proposed regression model was statistically significant ($F = 315.615$, $p < 0.001$), and that YouTube usage, as the independent variable, accounted for 46.6% of the variance in the variables of cognitive engagement and educational interaction ($R^2 = 0.466$).

According to the results of the bootstrap regression analysis, YouTube use has a positive effect on educational interaction and cognitive engagement (B = .711, SEB = .061, $p < .001$). Furthermore, since zero is not included within the 95% bootstrap confidence interval for the variables of cognitive engagement and educational interaction (0.578, 0.828), the result is confirmed with high confidence. Overall, the findings obtained from Spearman's correlation test and bootstrap regression analysis support the second hypothesis of this study.

Third Hypothesis: There is a significant relationship between the extent and purpose of YouTube usage and the level of students' learning improvement.

Table 5. Spearman Correlations and Bootstrap Multiple Regression Results for Predicting Learning Improvement

Predictors	Spearman's r_s	B	SE_B	β	T	P	R^2	F	95% Bootstrap CI [Lower, Upper]
Usage Purpose	-0.143	-0.019	0.020	-0.033	-0.846	0.357	>	>	-0.058, 0.022
YouTube Usage	0.620	0.733	0.063	0.689	17.695	0.001>	0.481	160.374	0.592, 0.851

To test the second hypothesis and examine the relationship between the amount of YouTube use and the purpose of using YouTube with the improvement of learning, the Spearman correlation test was employed because the data did not follow a normal distribution. The results of the test indicate that there is a weak negative relationship between improvement in the learning process and the primary purpose of using YouTube ($r_s = -0.143$, $p = 0.007$). However, there is a strong positive relationship between improvement in the learning process and the amount of YouTube usage ($r_s = 0.620$, $p < 0.001$).

Since the data of this study did not follow a normal distribution, multiple linear regression analysis with the bootstrap method and 5,000 resamples was conducted in the second stage to accurately and effectively examine the predictive contribution of the independent variables in explaining learning improvement. The results presented in the table above demonstrated that the proposed regression model was statistically significant ($F(2, 346) = 160.374$, $p < 0.001$). Furthermore, the two independent variables jointly explained 48.1% of the variance in the improvement of the learning process ($R^2 = 0.481$).

The bootstrap regression findings revealed that the amount of YouTube use had a strong positive effect on the improvement of the learning process ($B = 0.733$, $\beta = 0.689$, $t = 17.695$, $p < 0.001$). The 95% bootstrap confidence interval for the learning process improvement variable did not include zero [0.592, 0.851], confirming the significance of the effect. However, the variable representing the primary purpose of using YouTube did not show a significant effect in the regression model ($B = -0.019$, $\beta = -0.033$, $t = -0.846$, $p = 0.357$). The bootstrap confidence interval [-0.058, 0.022] included zero, indicating that the effect of this variable could not be confirmed. Overall, it can be concluded that only the third hypothesis of this study, regarding the effect of the amount of YouTube use on enhancing the learning process, was supported.

Discussion

The main objective of the present study was to examine the impact of YouTube use on improving the learning process of Faryab University students in the year 1404 (2025). To achieve the intended objective, three sub-hypotheses were developed based on the research variables and were tested. The findings of the above-mentioned tests are discussed below in light of the existing literature and the theoretical framework of the present study.

The findings indicate that the extent of YouTube use has a positive and strong effect on the variables of learning autonomy ($B = 0.812$) and sense of competence ($B = 0.75$). Furthermore, the results of the Spearman

correlation test also confirmed this relationship (r_s = .660, r_s = .708).

From a theoretical perspective, these findings are fully consistent with Self-Determination Theory proposed by Deci and Ryan. According to this theory, the quality of learning and intrinsic motivation increase when three basic psychological needs-autonomy, competence, and relatedness-are satisfied. YouTube, as a platform that provides learners with a high degree of independence in selecting the time, place, and type of educational content, helps fulfill the need for autonomy. In addition, certain features of YouTube, such as the ability to replay videos, pause content, and access step-by-step instructional materials, reduce barriers to understanding and foster a sense of mastery and competence in students.

From the empirical literature perspective, the findings of this study are consistent with Supendra and Amilia (2021), who found that while exploring educational content on YouTube, learners experience higher confidence, greater autonomy, and increased responsibility. Similarly, the results align with the studies of Dabamona and Yunus (2022), Schicchi, Marino and Taibi (2021), and Halim et al. (2022), all of whom described YouTube as a platform for self-directed and personalized learning. In addition, Astutie (2024) also emphasized independent thinking and active learning, which further supports the findings of the present study.

To confirm the second hypothesis of the study, Spearman correlation and linear regression with bootstrap were also employed. The results of the Spearman correlation (0.633) and bootstrap linear regression (B = 0.711) indicated that the level of YouTube usage has a positive and significant effect on students' cognitive engagement and educational interaction.

From a theoretical perspective, these findings are fully consistent with E-learning theory (Sweller et al. (1998); Mayer (2019); Wang and Chen (2020). According to this theory, the effective use of educational technologies and multimedia networks—provided that they are designed based on cognitive principles and the reduction of extraneous cognitive load—enhances learning depth. In this regard, YouTube, by simultaneously combining visual and auditory stimuli (Mayer's multimedia principle) and presenting coherent information, facilitates processing in working memory and prevents the accumulation of extraneous cognitive load. This process captures students' attention and enhances their cognitive engagement.

From the perspective of empirical literature, the results of the present study are fully consistent with Yahaya and Ahmad (2025), who found that videos containing visual elements such as animations and graphs significantly increase learner engagement. The studies conducted by Ongor and Uslusoy (2023), Yamin et al. (2023), Pratama et al. (2020), and and Babu et al. (2019) also support the findings of the current research. They concluded that multimedia content enhances interest, educational interaction, creativity, and cognitive engagement. In addition, the findings of Shahzadi (2024), which focused on student satisfaction and the positive impact of YouTube on their academic activities, are in line with this study.

To test the second hypothesis of the study, Spearman correlation and bootstrap multiple regression analyses were conducted. The Spearman correlation results (0.620) and bootstrap multiple regression results (B = 0.733) indicated that the level of YouTube usage has a positive and significant effect on students' learning improvement. However, both the Spearman correlation and bootstrap multiple regression results showed that the primary purpose of using YouTube did not have a significant positive effect on students' learning improvement (B = -0.019, r_s = -0.143).

The finding that the level of YouTube usage has a positive and strong effect on students' learning improvement is consistent with a large body of prior research. The results reported by Noetel et al. (2021), Salsabila et al. (2025), Amalia and Santoso (2025), Jafar et al. (2025), Almurashi (2016), Rustan and Hamidi (2024), Saed et al. (2021), Sahayu and Friyanto (2019), and Dabamona and Yunus (2022) are in agreement with these findings.

The above findings suggest that YouTube can enrich the educational experience and facilitate learning and the comprehension of concepts. These findings are also supported by the studies of Ali et al. (2022), Fadhil Abbas and Ali Qassim (2020), and Kariapper (2020), which reported similar results.

The findings of the present study further revealed that YouTube is used extensively at Faryab University. A noteworthy observation is that the majority of its use is for educational purposes. These results are consistent with previous studies conducted in Afghanistan. Haidari et al. (2020), Khalid (2020), and Hadid et al. (2025). concluded that YouTube is an important resource for developing students' skills and can contribute positively to academic achievement. Likewise, the findings of Darwishian et al. (1403) indicated that YouTube enhances learning beyond an average level. Noori et al. (2022) and Noori and

Bashardost (2026), found that YouTube promotes collaborative learning, improves access to educational resources, and enhances the quality of education. Moreover, YouTube can help compensate for the shortage of traditional and printed educational resources.

In conclusion, it can be inferred that YouTube has extensive applications in teaching and learning at Faryab University and has, to some extent, transformed the traditional structure of instruction. These findings indicate that the answer to the main research question is affirmative. Similarly, Abubakar, Muhammed and Zakaria (2025) and Salsabila et al. (2023), found that YouTube serves not only as an alternative source of instructional materials but also as a complementary educational tool and a highly effective motivator in the teaching and learning process. Likewise, Yamin et al. (2022), Ali et al. (2022), Abubakar et al. (2023), Tella et al. (2020), Noori and Noori (2021), and Kohler and Dietrich (2021) concluded in their studies that YouTube can serve as a rich resource for providing practical examples and reinforcing course content. These findings are also consistent with the results of the main hypothesis of the present study. Furthermore, the findings of Yahaya and Ahmad (2025) and Rahmatika et al. (2021) are in agreement with the results of the primary hypothesis of this research. Since the variable representing the primary purpose of using YouTube was not found to be statistically significant, it is recommended that instructors at Faryab University introduce students to high-quality and reliable YouTube channels. This would enable students to use these resources more effectively and in accordance with academic standards.

Conclusion

The empirical findings and the structural results of the bootstrap regression analyses demonstrated that, in addition to serving as a platform for information dissemination and entertainment, YouTube can also be regarded as a valuable supplementary tool in higher education in Afghanistan. The objective of this study was to examine the impact of YouTube usage on improving the learning process of students at Faryab University during the 1404 academic year.

The findings of the present study revealed that the systematic use of YouTube significantly enhances learning outcomes, particularly students' cognitive engagement and instructional interaction (B = 0.711). These results suggest that integrating YouTube into teaching and learning practices can positively contribute to students' academic engagement and facilitate a more interactive learning environment. Moreover, YouTube contributes to fulfilling basic psychological needs, such as autonomy and self-directed learning (B = 0.812). At the same time, it fosters academic confidence, especially students' perceived competence (B = 0.765).

On the other hand, the results of this study indicated that greater exposure to educational content on YouTube leads to significant improvements in the learning process (B = 0.733).

Given the limited availability of up-to-date printed resources and the inadequate educational infrastructure at Faryab University, YouTube can be effectively utilized as a supplementary instructional resource to help address these gaps, rather than as a replacement for traditional classroom teaching. Furthermore, the use of YouTube has the potential to provide students with more equitable access to knowledge. However, this can only be achieved if universities move beyond a passive role and adopt a more proactive approach to teaching and research by strategically integrating YouTube into their educational practices.

Research Limitations

Like other studies, the present research was accompanied by certain limitations and shortcomings, which are discussed below. The target population consisted of all full-time students of Faryab University during the 2025 academic year. Although this population is appropriate for small-scale studies, it limits the generalizability of the findings to the entire population of Afghanistan.

The possibility of individual bias and the tendency to provide socially desirable responses, which are associated with self-reported data, represent another major limitation of this study. Furthermore, the use of only a quantitative research method, which does not fully capture participants' experiences and perceptions, was also considered among the limitations.

Despite these limitations, efforts were made to minimize their potential impact on the research process. Therefore, it can be stated that the findings of this study may contribute to expanding knowledge regarding the impact of YouTube use on improving the learning process.

Authors Contributions

This article was prepared by two authors, each of whom played a distinct role in its development.

Mohammad Shafiq Wardak was responsible for the final editing and structuring of the manuscript, as well as the conclusion, limitations, recommendations, and the organization of the reference list.

Karimullah Noori contributed to drafting the main sections of the manuscript, data collection, the introduction, the literature review, addressing the reviewers' comments, and data analysis.

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Data Availability Statement

The data of this study will be made available to interested parties upon reasonable request.

Conflict of Interest Statement

The authors declare that they have no commercial or personal conflicts of interest, nor any financial relationships related to the publication of this article.

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